IN THE CLAIMS

Please enter the below claim amendments. The listing of claims will replace all prior versions, and listings, of claims in the application. For the examiner's convenience, a clean copy of the claims are provided in Appendix A, attached hereto.

1. (Currently amended) A method of equalizing output signals from ~~one~~ a first and a second ~~or more~~ microphone [[s]], the method comprising the steps of:

generating a first predictable noise;

~~applying~~ converting ~~a~~ the first predictable noise ~~to a converter having a known transfer function to convert the first predicable noise~~ to an audio output using a converter having a known transfer function~~based on the transfer function of the converter~~;~~, and~~

~~applying~~ receiving the audio output ~~to~~ at the first microphone;

~~without adaptively modifying the audio output to convert~~converting the audio output to a first output noise;

generating a second predictable noise;

synchronizing the first predictable noise and the second predictable noise in time by a synchronizer;

compensating ~~applying a~~ the second predictable noise ~~to a compensation filter for compensating~~ for the known transfer function ~~of the converter~~by a compensation filter;~~, the first and second predictable noises being synchronized in time by a synchronizer,~~

outputting ~~the compensation filter outputting~~ a second output noise ~~based on the compensation~~by the compensating filter;

~~explicitly~~ determining coefficients representing~~identifying~~ a transfer function of the first microphone based on the ~~corresponding~~ first and second output noises;

~~based on a single selected function for the one or more microphones,~~

determining a filtering function for the first microphone, wherein ~~such that~~ the product of the transfer function and the filtering function is ~~the~~ a single selected function~~;~~, and wherein the single selected function equals a second product of a second transfer function and a second filter function of the second microphone; and

outputting the coefficients to an equalization filter.

~~applying the filtering function for the microphone to an equalization filter for the~~

~~microphone such that a transfer function between the microphone and the equalization filter for the microphone is substantially equal to the single selected function~~.

2. (Currently amended) A method according to claim 1, wherein the single selected function is the transfer function of one of the first and second microphones.

3.. (Currently amended) A method according to claim 1, wherein the single selected function is a common factor~~, and wherein the filtering function is determined such that the product of the transfer function of the microphone and the filtering function is the common factor~~.

4. (Currently amended) A method according to claim 1, ~~wherein the step of applying the filtering function comprises~~further comprising the ~~a~~ step of:

loading the filtering function to the equalization filter.

5. (Currently amended) A method according to claim 1, wherein~~:~~

~~the step of applying a first predictable noise comprises a step of:~~

~~providing~~ the first predictable noise is a first predictable noise sample signal ~~to the converter, the converter converting the first predicable noise sample signal to the audio noise output,~~

~~the step of applying a~~the second predictable noise ~~comprises a step of:~~

~~providing~~ is a second predictable noise sample signal ~~to the compensation filter,~~and wherein the second predictable noise sample signal ~~having~~ has a property substantially identical to the first predictable noise sample signal ~~and being substantially identical to the first predictable noise sample signal on a sample-by-sample basis, the first and second predictable noise sample signals being synchronized in time by the synchronizer, the compensating filter compensating the second predictable noise sample signal for the transfer function of the converter and outputting the second output noise based on the compensation~~.

6. (Cancelled)

7. (Currently amended) A method according to claim 1~~, wherein:~~

~~the step of applying a first predictable noise comprises a step of:~~

~~applying a first predictable noise signal to the converter, the converter converting the first predicable noise signal to a first predictable noise sample, the step of applying the audio output comprises, a~~ further comprising the steps of:

~~acoustically~~ providing a propagation time delay for the first predictable noise~~ sample to the microphone with a propagation time delay,~~ before the first microphone converting the first predictable noise sample ~~with the propagation time delay~~ to the first output noise;[[,]] and

delaying the second output noise by same amount of time as the propagation delay time.

~~the step of applying a second predictable noise comprises a step of:~~

~~providing applying a second predictable noise signal to the compensation filter, the first and second predictable noise signals being synchronized in time by the synchronizer, the compensation filter compensating the second predictable noise signal for the transfer function of the converter and outputting the second output noise based on the compensation.~~

8. (Currently amended) A method according to claim 7, wherein the first predictable noise signal is a first predictable digital noise signal, and the second predictable noise signal is a second predictable digital noise signal~~, and wherein:~~

~~the step of applying a first predictable noise comprises a step of:~~

~~generating the first predictable digital noise signal, and~~

~~the step of applying a second predictable noise comprises a step of:~~

~~generating the second predictable digital noise signal~~ .

9 -10. (Cancelled)

11. (Currently amended) A method according to claim 7, wherein the propagation delay time is ~~selected to be~~ an integer multiple of the first predictable noise sample.

12. (Previously presented) A method according to claim 8, wherein the step of generating the first predictable digital noise signal includes a step of utilizing a maximum length sequence generator to generate the first predictable digital noise signal.

13. (Previously presented) A method according to claim 8, wherein the step of generating the second predictable digital noise signal includes a step of utilizing a maximum length sequence generator to generate the second predictable digital noise signal that is substantially identical to the first predictable digital noise signal on a sample-by-sample basis.

14. (Currently amended) A method according to claim 8, wherein ~~each of~~ the first predictable digital noise signal ~~and~~ or the second predictable digital noise signal comprises a white noise signal.

15. (Currently amended) A method according to claim 8, wherein ~~each of~~ the first predictable digital noise signal ~~and~~ or the second predictable digital noise signal comprises a random noise signal.

16. (Currently amended) An apparatus for equalizing output signals from a first and a second microphones, the apparatus comprising:

a first generator generating a first predictable noise;

~~a module for applying a~~a first converter converting the first predictable noise ~~to a converter having a known transfer function, the converter converting a first predicable noise~~ to an audio output~~.~~, the first converter having a known transfer function~~based on the transfer function of the converter~~, the first microphone receiving the audio output;

a second converter converting the audio output to a first output noise;

a second generator generating a second predictable noise;

a synchronizer synchronizing the first generator and the second generator,

~~a module for applying the audio output to the microphone without adaptively modifying~~

~~the audio output, the microphone converting the audio output to a first output noise; a module for applying a second predictable noise to~~ a compensation filter ~~for~~ compensating ~~for~~ the known transfer function of the first converter~~, the second predictable noise being synchronized with the first predictable noise by a synchronizer~~, the compensation filter outputting a second output noise based on the compensation;

an identification circuit ~~module for explicitly identifying~~determining coefficients representing a transfer function of the first microphone based on the ~~corresponding~~ first and second output noises;

a determination circuit ~~module for~~ determining a filtering function for the first microphone, wherein ~~based on a single selected function for the one or more microphones such that~~ the product of the transfer function of the microphone and the filtering function is ~~the~~ a single selected function, and wherein the single selected function equals a second product of a second transfer function and a second filter function of the second microphone;[[;]] and

an equalization filter receiving the coefficients.

~~a module for applying the filtering function for the microphone to an equalization filter for the microphone such that a transfer function between the microphone and the equalization filter for the microphone is substantially equal to the single selected function.~~

17. (Currently amended) An apparatus according to claim 16, wherein the single selected function is the transfer function of one of the first and second microphones.

18. (Currently amended) An apparatus according to claim 16, wherein the single selected function is a common factor~~, and wherein the filtering function is determined such that the product of the transfer function of the microphone and the filtering function is the common factor~~.

19. (Currently amended) An apparatus according to claim 16, ~~wherein the module for applying the filtering function comprises~~further comprising:

~~(b)~~ a ~~module for~~ loader loading the filtering function to the equalization filter.

20. (Currently amended) An apparatus according to claim 16, wherein~~:~~

~~the module for applying a~~ the first predictable noise ~~comprises:a noise generator for generating~~is a first predictable noise sample signal; [[,]]and wherein the second predictable noise is ~~generating~~ a second predictable noise sample signal, and wherein the second predictable noise sample signal ~~having~~ has a property substantially identical to the first predictable noise sample signal ~~and being substantially identical to the first predictable noise sample signal on a sample by sample basis, the converter converting the first predicable noise sample signal to the audio noise output, the first and second predictable noise sample signals being synchronized in time by the synchronizer, the compensation filter compensating the second predictable noise sample signal for the transfer function of the converter and outputting the second output noise based on the compensation~~.

21. (Currently amended) An apparatus according to claim 20, ~~wherein the microphone is capable of converting a sound signal to an electrical analog signal, and wherein the apparatus comprises~~further comprising an analog-to-digital converter coupled to the microphone ~~for~~ converting ~~the~~ an electrical analog signal of the first microphone into a digital signal.

22. (Currently amended) An apparatus according to claim 16~~, wherein:~~

~~the module for applying a first predictable noise comprises:~~

~~a module for applying a first predictable noise signal to the converter, the converter converting the first predicable noise signal to a first predictable noise sample based on the transfer function of the converter,~~

~~the module for applying the audio output comprises:~~, further comprising:

a module ~~for acoustically~~ providing the first predictable noise ~~sample to the microphone~~ with a propagation time delay, before the first microphone converting the first predictable noise sample ~~with the propagation time delay~~ to the first output noise[[,]]; and

~~the module for applying a second predictable noise comprises:~~

a second module ~~for~~ providing a second predictable noise with the

propagation time delay~~signal to the compensation filter, the first and second predictable noise signals being synchronized in time by the synchronizer, the compensation filter compensating the second predictable noise signal for the transfer function of the converter and outputting the second output noise based on the compensation~~.

23. (Currently amended) An apparatus according to claim 22, wherein the first predictable noise signal is a first predictable digital noise signal, and the second predictable noise signal is a second predictable digital noise signal, ~~and wherein the apparatus comprises~~further comprising:

a noise generator for generating the first predictable digital noise signal and the second predictable digital noise signal.

24. (Cancelled)

25. (Previously presented) An apparatus according to claim 23, wherein the noise generator includes a maximum length sequence generator for generating the first predictable digital noise signal that is substantially identical to the second predictable digital noise signal on a sample-by-sample basis.

26. (Currently amended) An apparatus according to claim 16, wherein the first converter includes[[:]] a loud speaker.

27. (Currently amended) An apparatus according to claim 23, wherein the first predictable digital noise signal is a first maximum length sequence noise, and wherein the second predictable digital noise signal ~~being~~ is a second maximum length sequence noise ~~that is~~being substantially identical to the first maximum length sequence noise on a sample-by-sample basis.

28. (Cancelled) .

29. (Currently amended) An apparatus according to claim 22, wherein the propagation delay time is ~~selected to be~~ an integer multiple of the first predictable noise sample.

30. (Currently amended) An apparatus according to claim 23, wherein ~~each of~~ the first predictable digital noise signal ~~and~~ or the second predictable digital noise signal comprises a white noise signal.

31. (Currently amended) An apparatus according to claim 23, wherein ~~each of~~ the first predictable digital noise signal ~~and~~ or the second predictable digital noise signal comprises a random noise signal.

32. (Previously presented) An apparatus according to claim 23, wherein the noise generator includes a maximum length sequence generator for generating the first predictable digital noise signal and the second predictable digital noise signal.

33. (Currently amended) A method for equalizing two or more microphones in a listening devices ~~comprising one or more microphones for transmitting sound signals to a user, outputs from the one or more microphones being equalized~~ using the method according to claim 1.

34. (Currently amended) A method for equalizing two or more microphones in a hearing aid ~~comprising one or more microphones for transmitting sound signals to a user, outputs from the one or more microphones being equalized using the method~~ according to claim 1.

35. (Currently amended) A method for equalizing two or more microphones in a headset ~~comprising one or more microphones for transmitting sound signals to a user, outputs from the one or more microphones being equalized using the method~~ according to claim 1.

36. (Currently amended) [[A]] An apparatus according to claim 16, wherein the apparatus is a listening device ~~comprising:~~

~~one or more microphones for transmitting sound signals to a user, outputs from the one or more microphones being equalized by the apparatus according to claim 16~~.

37. (Currently amended) An apparatus according to claim 16, wherein the apparatus is a~~A~~

hearing aid~~comprising:~~

~~one or more microphones for transmitting sound signals to a user, outputs from the one or more microphones being equalized by the apparatus according to claim 16~~.

38. (Currently amended) An apparatus according to claim 16, wherein the apparatus is a ~~A~~ headset~~comprising:~~

~~one or more microphones for transmitting sound signals to a user, outputs from the one or more microphones being equalized by the apparatus according to claim 16~~.

39. (Currently amended) A listening device according to claim 36, further comprising:

a signal equalization filter provided for each of ~~one or more~~the first and the second microphones, wherein the function of the signal equalization filter is determined by the apparatus according to claim ~~16~~ 36 and is loaded to the signal equalization filter.

40. (Currently amended) A hearing aid according to claim 37, comprising:

a signal equalization filter provided for each of one or more microphones, wherein the function of the signal equalization filter is determined by the apparatus according to claim ~~16~~ 37 and is loaded to the signal equalization filter.

41. (Currently amended) A headset according to claim 38, further comprising:

a signal equalization filter provided for each of the first and the second ~~one or more~~ microphones, wherein the function of the signal equalization filter is determined by the apparatus according to claim ~~16~~ 38 and is loaded to the signal equalization filter.

42. (Currently amended) A method of providing sound signals to a user through a system including ~~one~~ two or more microphones, the method comprising steps of:

preparing a filtering function for each of one or more microphones, including, for each of the ~~one~~ two or more microphones, the steps of:

generating a first predictable noise;

converting the first predictable noise ~~to a converter having a known transfer function, the converter converting the first predicable noise~~ to an audio output

using a converter having a known transfer function ~~based on the transfer function of the converter;~~

~~applying~~ receiving the audio output ~~to the~~at a first microphone ~~without adaptively modifying the audio output, the microphone~~

converting the audio output to a first output noise; ~~and~~

generating a second predictable noise;

synchronizing the first predictable noise and the second predictable noise in time by a synchronizer;

compensating the~~applying a~~ second predictable noise ~~to a compensation filter for compensating~~ for the known transfer function ~~of the converter,~~ by a ~~the first and second predictable noises being synchronized in time by a synchronizer, the~~ compensation ~~filter~~ filter;

outputting a second output noise by the compensating filter;~~based on the compensation,~~

determining coefficients representing ~~explicitly identifying~~ a transfer function of the first microphone based on the ~~corresponding~~ first and second output noises; and

determining ~~the~~ a filtering function for the first microphone, wherein ~~based on a single selected function for the one or more than microphones such that~~ the product of the transfer function of the microphone and the filtering function is ~~the~~ a single selected function, wherein the single selected function equals a second product of a second transfer function and a second filter function of the other members of the two or more microphones; and

outputting the coefficients to an equalization filter; and

~~applying the filtering function for the microphone to an equalization filter for the microphone such that a transfer function between the microphone and the equalization filter for the microphone is substantially equal to the single selected function,~~

operating the system, including the step of:

for each of the ~~one~~ two or more microphones, transferring a sound signal through the microphone and the equalization filter for the microphone.

43. (Currently amended) A sound system for ~~one~~ two or more microphones for transmitting sound signals, comprising:

a first generator generating a first predictable noise;

a first converter converting the first predictable noise to an audio output, the first converter having a known transfer function, wherein a first microphone of the two or more microphones receiving the audio output;

a second converter converting the audio output to a first output noise;

a second generator generating a second predictable noise;

a synchronizer synchronizing the first generator and the second generator,

~~a module for applying a first predictable noise to the converter, the converter converting the first predicable noise to an audio output based on the transfer function of the converter;~~

~~a module for applying the audio output to the microphone without adaptively modifying the audio output the microphone converting the audio output to a first output noise;~~

a compensation filter ~~for~~ compensating ~~for~~ the known transfer function of the first converter, the compensation filter outputting a second output noise based on the compensation;

~~a module for applying a second predictable noise to the compensation filter, including a synchronizer for synchronizing the first and second predictable noises in time, the compensation filter outputting a second output noise based on the compensation;~~

an identification circuit determining coefficients representing ~~for explicitly identifying~~ a transfer function of the first microphone based on the ~~corresponding~~ first and second output noises; ~~and~~

a determination circuit ~~for~~ determining a filtering function for the first microphone wherein ~~based on a single selected function for the one or more microphones such that~~ the product of the transfer function of the microphone and the filtering function is ~~the~~ a single selected function, , and wherein the single selected function equals a second product of a second transfer function and a

second filter function of other members of the two or more microphones; and

an equalization filter receiving the coefficients.

~~the filtering function being applied to an equalization filter for the microphone such that a transfer function between the microphone and the equalization for the microphone is substantially equal to the single selected function.~~

44. (Currently amended) A sound system according to claim 43, wherein the single selected function is the transfer function of one of the two or more microphones.

45. (Currently amended) A sound system according to claim 43, wherein the single selected function is a common factor~~, and wherein the filtering function is determined such that the product of the transfer function of the microphone and the filtering function is the common factor~~.

46. (Currently amended) A sound system according to claim 43, wherein~~:~~

~~the module for applying the audio output comprises:~~

~~(a) a module for providing a~~ the first predictable noise is a first predictable noise signal~~ to the microphone through the converter to convert the first predictable noise signal to the first output noise,~~;

~~the module for applying a~~ wherein the second predictable noise ~~comprises:~~

~~(b) a module for providing~~is a second predictable noise signal~~ to the compensation filter,~~; and wherein the second predictable noise signal ~~having~~ has a property substantially identical to the first predictable noise signal~~ and being substantially identical to the first predictable noise signal on a sample-by-sample basis~~.

47. (Currently amended) A sound system according to claim 46, wherein the first generator ~~module for providing a first predictable noise signal~~ includes a maximum length sequence generator for generating the first predictable noise signal.

48. (Previously presented) A sound system according to claim 47, wherein the maximum length sequence generator generates the second predictable noise signal.

49. (Currently amended) An apparatus according to claim 16, wherein the identification circuit~~module for identifying a transfer function~~ performs an Auto Regressive Moving Average (ARMA) to estimate the transfer function.

50. (Currently amended) A sound system according to claim 43, wherein the identification ~~identifying~~ circuit performs an Auto Regressive Moving Average (ARMA) to estimate the transfer function.

51. (Currently amended) A method according to claim 1, wherein ~~the one or more microphones comprises at least a first microphone and a second microphone, and wherein~~ an output signal through the first microphone and the equalization filter for the first microphone is substantially equal to an output signal through the second microphone and the equalization filter for the second microphone with respect to phase or phase and magnitude.

52. (Currently amended) An apparatus according to claim 16, ~~wherein the one or more microphones comprises at least a first microphone and a second microphone, and~~ wherein an output signal through the first microphone and the equalization filter for the first microphone is substantially equal to an output signal through the second microphone and the equalization filter for the second microphone with respect to phase or phase and magnitude.

53. (Currently amended) A method according to claim 42, wherein the ~~one~~ two or more microphones comprises at least a first microphone and a second microphone, and wherein an output signal through the first microphone and the equalization filter for the first microphone is substantially equal to an output signal through the second microphone and the equalization filter for the second microphone with respect to phase or phase and magnitude.

54. (Currently amended) A system according to claim 43, wherein the ~~one~~ two or more microphones comprises at least a first microphone and a second microphone, and wherein an

output signal through the first microphone and the equalization filter for the first microphone is substantially equal to an output signal through the second microphone and the equalization filter for the second microphone with respect to phase or phase and magnitude.